AMENDMENTS TO THE CLAIMS

Applicant has canceled Claims 1 and 2 without prejudice and amended Claims 3 and 5 as follows:

1. (Canceled)

2. (Canceled)

3. (Currently amended) ~~The method as recited in claim 2,~~A method for finding a threshold value in image segmentation, the method comprising the steps of:

a) gaining histogram distribution of an image;

b) computing entropy values corresponding to gray levels in the histogram; and

c) gaining a minimum entropy value corresponding to the gray level as the threshold value by using a fixed point interation FPI based on the computed entropy values, wherein the step c) includes the steps of:

c-1) obtaining a plurality of possible optimal thresholds,

c-2) obtaining entropy values of gray levels corresponding to the obtained possible optimal thresholds, and

c-3) obtaining the threshold value by comparing entropy values and selecting minimum entropy value,

wherein each of the possible optimal thresholds is obtained by obtaining a value of possible maximum gray level having maximum entropy value, a value of possible minimum gray level having minimum entropy value and obtaining possible optimal threshold by adding two values of the possible maximum gray level and the possible minimum gray level and dividing the sum of addition by half.

4. (Original) The method as recited in claim 3, wherein the possible optimal thresholds are obtained by changing one of the value of the possible maximum gray level and the value of the possible minimum gray level according to comparison of entropy values of the possible maximum gray level, the possible minimum gray level and obtained optimal threshold and by newly obtaining a possible optimal threshold based on the changed values of the possible maximum gray level and the value of the possible minimum gray level.

5. (Currently amended) ~~The method as recited in claim 2.~~ A method for finding a threshold value in image segmentation, the method comprising the steps of:

a) gaining histogram distribution of an image;

b) computing entropy values corresponding to gray levels in the histogram; and

c) gaining a minimum entropy value corresponding to the gray level as the threshold value by using a fixed point interation FPI based on the computed entropy values, wherein the step c) includes the steps of:

c-1) obtaining a plurality of possible optimal thresholds,

c-2) obtaining entropy values of gray levels corresponding to the obtained possible optimal thresholds, and

c-3) obtaining the threshold value by comparing entropy values and selecting minimum entropy value,

wherein the step c-1) includes the steps of:

c-i) obtaining an initial possible optimal threshold, an initial possible maximum gray level having maximum entropy value and an initial possible minimum gray level having minimum entropy value by setting G_{min} to have the initial possible minimum gray level, setting G_{max} to have the initial possible maximum gray level, setting g_{min} and g_{max} to have identical values G_{min} and G_{max}, respectively for not influencing change of value of G_{min} and G_{max}, setting P_i to have the initial possible optima threshold by computing equation $P_i = ((g_{min} + g_{max})/2)$ and setting g_{cal} to have the identical value of P_i;

c-ii) obtaining entropy values $E(g_{min})$, $E(g_{max})$ and $E(g_{cal})$ of g_{min}, g_{max}, and g_{cal};

c-iii) comparing $E(g_{min})$ and $E(g_{cal})$;

c-iv) if $E(g_{min})$ is higher than $E(g_{cal})$ as a result of comparison of step c-iii), changing the value of g_{min} to have the value of g_{cal} and not changing the value of g_{max} by setting a value of g_{temp} to have the value of g_{min} and setting a value of g_{fix} to have the value of G_{max};

c-v) if $E(g_{min})$ is equal or less than $E(g_{cal})$ as a result of comparison of step c-iii), changing the value of g_{max} to have the value of g_{cal} and not changing the value of g_{min} by setting a value of g_{temp} to have the value of g_{max} and setting a value of g_{fix} to have the value of G_{min};

c-vi) obtaining new possible optimal threshold ~~p~~P_i based on changed value of g_{min} and g_{max} by an equation as: $P_i = (g_{fix} + g_{temp})/2$;

c-vii) obtaining ~~p~~P_{i+1} by using a linear equation f with (g_{temp}, 0), wherein the f is $f(g) = ag+b$, $a = g_{temp}$ and b is 0 and by equation as ~~p~~$P_{i+1} = f^{-1}(E($~~p~~$P_i))$;

c-viii) comparing ~~p~~P_{i+1} with previously obtained ~~p~~P_is;

c-ix) if there are not identical two P_is, determining next possible optimal threshold by setting g_{temp} to have the value of ~~p~~P_{i+1} and setting g_{cal} to have a value of ($g_{temp} + g_{fix}$)/2, and ~~reputedly~~ repeatedly performing steps c-ii) to c-viii); and

c-x) if there are identical any two P_is, selects the threshold value by comparing entropy values of corresponding P_is and selecting P_i having minimum entropy value as the threshold value.